Taking Part in Clinical Trials: Cancer Prevention Studies

What Participants Need To Know

NATIONAL INSTITUTES OF HEALTH
National Cancer Institute

Cancer affects us all —
whether we have the disease,
have had it,
care about someone with it,
or worry about getting it.

Cancer prevention studies
add to knowledge and
progress against cancer.

Contents

Introduction

You may have asked for, or been given, this booklet because you have a higher risk for a certain type of cancer than most people, or you may want to learn about ways to prevent cancer. There are two types of prevention clinical trials that study ways to reduce the risk of getting cancer:

- Action studies (*doing* something) — These focus on finding out whether actions people take, such as getting more exercise or quitting smoking, can prevent cancer.

- Agent studies (*taking* something) — These studies (also called chemoprevention studies) focus on learning whether taking certain medicines, vitamins, minerals, or food supplements can prevent cancer.

This booklet is for people who want to learn more about ***agent*** studies designed to prevent cancer. When ***"cancer prevention trials or studies"*** are mentioned in this booklet, they refer only to ***agent*** studies. If you want to learn more about other types of clinical trials, including other types of prevention studies, the resources listed on page 23 and 24 can help you.

The booklet explains what prevention clinical trials are, how they work, and why they're done. This can help readers decide whether taking part in a cancer prevention clinical trial is right for them. Words that appear in bold on pages 1 to 22 are defined in the Glossary that begins on page 25.

What Is Cancer?

Cancer occurs when, for unknown reasons, cells divide without control or order. All parts of the body are made up of cells that normally divide to produce more cells only when the body needs them. When cancer occurs, cells keep dividing even when new cells are not needed. The change from normal to cancerous cells requires several separate, different gene alterations. Eventually uncontrolled growth from altered genes may produce a tumor that can be benign (not cancer) or malignant (cancer). Malignant tumors can invade, damage, and destroy nearby tissues and spread to other parts of the body. A benign tumor won't spread to other parts of the body, but local tissue may be damaged and the growth may need to be removed.

What Are Cancer Risk Factors?

A cancer risk factor may mean you have an increased chance to develop cancer. It *doesn't* mean that you will develop cancer. Some people have a greater than average chance to get a certain cancer because they have one or more risk factors.

Doctors are still learning the role of risk factors in different cancers. Some risk factors make it very likely that a person will develop cancer; others seem to increase a person's risk only slightly.

Risk factors fall into four broad groups and can overlap. For some cancers, different types of risk factors can work together to increase cancer risk.

1. Lifestyle or behavioral risk factors.

These are things people do that make it more likely that they will develop cancer. For example, smoking is strongly linked to lung cancer and a type of sunlight rays (ultraviolet, or U.V., rays) are linked to melanoma, a form of skin cancer.

Lifestyle factors can also reduce cancer risk, such as eating plenty of fruits, vegetables, and fiber to lower the risk for cancer of the colon and rectum.

2. Hereditary risk factors.

There are altered or changed genes that are passed on from parent to child, making a person more likely to get cancer. For example, changes in two genes — BRCA1 and BRCA2 — can make a person more likely to get breast cancer.

If you know that one type of cancer seems to run in your family, you may wish to speak with a trained genetic counselor. The counselor can answer many of your questions about cancer risk. You also may be able to get a test to see if you were born with a higher risk for getting cancer. Some people worry about how they'll feel if they learn they have a higher risk for cancer, especially if there's no method available to reduce their risk. Other people want to know, no matter what.

To find out more about gene testing, read *Understanding Gene Testing*. You can call the National Cancer Institute's (NCI) Cancer Information Service at 1-800-4-CANCER to get a copy of this booklet and other information about gene testing and counseling.

3. Environmental risk factors.

There are agents such as asbestos and radon that are linked with a higher cancer risk (an increased risk for cancer). People are sometimes exposed to cancer-causing agents in their workplace.

4. Medical risk factors.

Certain health conditions may increase a person's risk for some cancers, for example:

- colon polyps — abnormal growth of tissue in the lining of the bowel.
- previous cancer — having had radiation or chemotherapy treatment for illness, such as breast cancer, may put you at higher risk for the same type of cancer to return or to get a different type of cancer.

If a person has one or more of these risk factors, he or she may want to know more about cancer prevention trials. If you think you may be at risk for getting cancer, you can find out whether or not you are eligible to join a cancer prevention study. (See the section on page 11 — *Who Can Participate?*)

What Is a Cancer Prevention Clinical Trial?

What Is a Clinical Trial?

Clinical trials, also known as clinical studies, are research studies in which people help doctors find ways to improve health and health care. Many of today's treatments for cancer are based on the results of past clinical trials. Examples include clinical studies to treat or prevent breast and childhood cancers. Because of progress made through clinical trials, many people treated for cancer are now living longer.

In cancer prevention trials, people take medicines, vitamins, minerals or other supplements that doctors believe may lower the risk of a certain type of cancer. Scientists who conduct these studies want to learn:

- Does the medicine or supplement (often called a study agent) prevent cancer?
- How safe is it to take the study agent?

How Are Cancer Prevention Clinical Trials Different From Other Cancer Studies?

There are different types of cancer clinical trials or studies. They include:

- chemoprevention trials designed to help people who have not previously had cancer;
- chemoprevention trials designed to prevent a new type of cancer from developing in people who have had cancer;
- early detection trials to find cancer, especially in its early stages;
- treatment trials to test new treatments in people who have cancer; and
- quality of life studies to improve comfort and quality of life for people who have cancer.

Some studies, such as treatment clinical trials and quality-of-life studies, are for people who already have cancer. Certain chemoprevention trials are for people who are cancer survivors who want to lower their risk for getting another cancer. This booklet describes cancer prevention trials or studies for people who haven't had cancer. People in these trials are usually healthy people who want to lower their risk for the disease.

How Do Researchers Design Cancer Prevention Clinical Trials?

A cancer prevention clinical trial that involves people results from a long and careful research process. As with other types of trials, each step, or phase, answers different questions about the study agent which can be a medicine, vitamin, mineral, food supplement, or a combination of these.

- **Phase I** trials are the first step in testing a prevention agent in people. Doctors try to find the best way to give the study agent (for example, by mouth), the best dose, and if there are any harmful side effects.
- **Phase II** trials focus on learning whether the agent has a biologic effect in preventing cancer.
- **Phase III** trials compare a promising new agent to the standard one or to no agent, using two groups of people:
  - The intervention group — This is the group taking the study agent.
  - The control group — This group takes either:
    1. a standard agent that's being compared with the study agent;
    2. a look-alike pill that contains no active ingredient, called a placebo.

Because less is known about possible risks and benefits in Phase I and II, these trials usually include only a small number of participants. In most cases, studies move into

Phase III testing only after an agent shows promise in Phases I and II. Phase III trials may include hundreds of research centers around the country and hundreds or thousands of people.

Clinical trials follow strict guidelines for science and ethics. These guidelines deal with many areas, including the study's design and who can be in the study. Every trial has a chief investigator, who is usually a doctor. The investigator prepares a study action plan, called a protocol. This plan explains what the trial will do, how, and why. For example, it states:

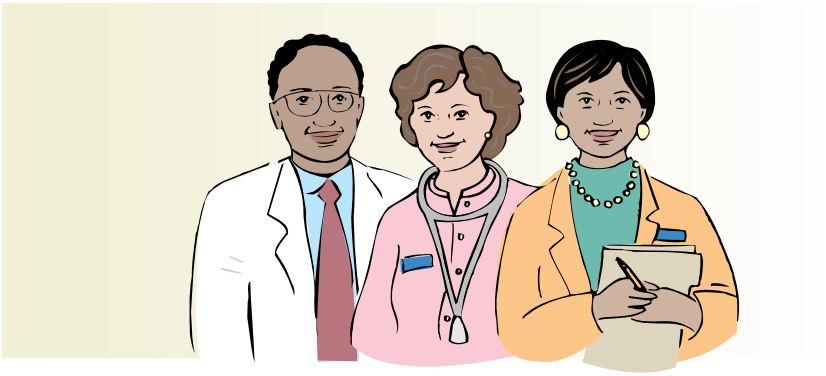
- How many people will be in the study.
- Who is able to be in the study.
- What study agents people will take.
- What medical tests they will have and how often.
- What information will be gathered.

Every research center that takes part in the trial uses the same protocol. This ensures that information from all centers can be combined.

How Do Review Groups Protect Participants?

Clinical trials have several procedures to protect the safety of the people who join the study. Several groups have to approve the protocol for every study. Two of those groups are the sponsor of the study (for example, the National Cancer Institute) and the Institutional Review Board (IRB).

Every study center has an IRB, which includes doctors, other health care providers, consumers, and sometimes members of the clergy who do not have any personal interest in the results of the study which would bias them. They serve as neutral reviewers and ensure that the study is managed fairly and that no one is likely to be harmed who may decide to join. Each Phase III cancer prevention study also has a special group called a Data Safety and Monitoring Committee that looks at the test results and monitors the safety of the participants, and decides whether the study should go forward as originally planned.



What Happens in a Phase III Cancer Prevention Clinical Trial?

If you decide to join a Phase III cancer prevention trial, you'll work with a research team. Team members may include doctors, nurses, social workers, and other health care providers. They will give you clear instructions. You may be asked to take a medication. You also may be asked to keep a diary or answer questions about how you're feeling.

During the study, a research team will review your health carefully. (This means that you may have more tests and doctor visits than you would if you weren't in the study.) Team members also may check on you for a while after the trial ends (followup). To make the trial results as reliable as possible, it is important for you to follow the research team's instructions. That means having all doctor visits and tests, taking medicines on time, and filling out logs or answering questions. Careful review and followup help you and scientists find out quickly what agent is best for reducing cancer risk.

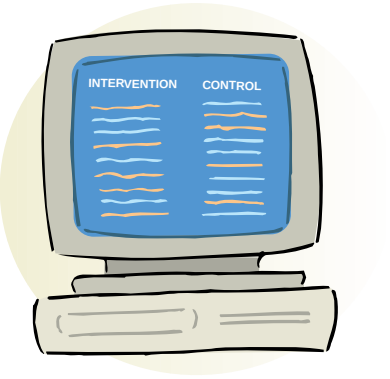
Who Can Participate?

Clinical trials try to enroll people who are alike in certain ways, depending on the study's purpose. Every protocol tells who can join that study and spells out the characteristics that people should have. These are called eligibility criteria. They may include age, gender, general health, and cancer risk factors.

Eligibility criteria are a key part of medical research. They help produce results we can trust. And after those results are known, the information can help doctors find out who will be helped by the approach being studied if it's shown to work. For example, a new drug may work for people with one type of risk factor but not for another, or it may work better for men than for women.

Eligibility criteria also help protect you. They help make sure that if you are likely to be harmed by something in the study design, you are not exposed to that risk.

How Are Participants Assigned to Groups?



Doctors use a process called randomization (chance) using a computer to assign you to either the intervention group or the control group in Phase III studies. This method ensures that certain factors and human choices don't affect study results, making them less reliable. When groups are compared with each other, it is clear whether the study agent works or has bad side effects. This also helps ensure that the findings really result from the study agent, and not from something else.

Most Phase III cancer prevention studies use a double-blind research design. This means that neither you nor the doctors know which people are taking the study agent or the control agent. Only the researchers at a central office know. Sometimes a doctor needs to find out if a participant has taken the study agent. A doctor can find this out, if needed, by talking with the central office staff.

No one knows whether it is better to be in the intervention or control group until the study is over and the results are ready. If that were known, there would be no need for the study. Either group may have good results or problems. The results help doctors decide whether to advise people to take the study agent for cancer prevention.

What Is Informed Consent?

Informed consent is a process during which you learn key facts about a clinical study before you decide whether or not to join. These facts include details about the study approach and tests you may have, and the benefits and risks that could result. (See the section on page 15 — *Should I Take Part in a Cancer Prevention Study?*)

The doctor or nurse will give you a form that goes over key facts. It's called a consent form. If you decide to take part in the study, you'll be asked to sign this form. You can take the form home and discuss it with your family, friends, or others before you make your decision. If you do decide to join the study, be sure to ask for a copy of the consent form so you can look it over at any time.

Don't be afraid to ask questions until you get all the facts you need to decide. This is an important decision, and you should feel at ease with the choice you make. In fact, you should feel free to ask the research team questions at any time.

Informed consent is more than a piece of paper; it's a process that lasts throughout a study. For example, you may be told about new risks or other findings from the study, and asked to sign a new consent form. As always, the choice to join or to continue is yours.

You Can Leave the Study at Any Time

Informed consent lasts as long as you're in the study. You can change your mind and leave the study any time you want--before the study starts or at any time during the study or follow-up period. If you decide to leave, you'll have a chance to talk about other prevention options with your own doctor or with a doctor from the study.

WHAT PROTECTIONS DO YOU HAVE?

Before and during a cancer prevention trial, you have several important rights:

- ***Informed consent*** — the right to know all you need to make a thoughtful decision about joining a study.
- ***Changing your mind*** — the right to leave the study at any time.
- ***Medical monitoring*** — the right to have your health watched throughout the study.
- ***Removal from harm*** — the right to be taken off the study if doctors learn that an agent may harm you.

Should I Take Part in a Cancer Prevention Clinical Trial?

People decide to be part of a cancer prevention clinical trial for many reasons. For example:

- Some people who have a higher cancer risk join a cancer prevention trial because they want to take a more active role in their health care. Also, because study participants get regular and careful medical attention, some health problems may be found early.
- Some people feel good about helping medical knowledge advance. If the study agent turns out to work against cancer, it may help others. For example, prevention trials showed that aspirin helps prevent heart attacks, and now many people take aspirin daily on their doctor's advice.

Even when they don't lead to new therapies, clinical trials often answer important questions and help move research forward.

You need to weigh the benefits and risks for yourself. The list in the next section may help you do that. You also may find it useful to talk with family members or friends, your health care providers, and anyone you know who has been in a clinical trial.

Remember: You are the only person who can make this decision, and if you join a clinical trial, you can change your mind *at any time* — even after the study starts.

Prevention Clinical Trials: Weighing the Pros and Cons

Possible Benefits

- If the agent being studied is found to be helpful, you may be among the first to benefit.
- In a cancer prevention clinical trial, your health is reviewed with care.
- A cancer prevention clinical trial gives you a chance to help doctors learn more about cancer prevention and help others.

Possible Drawbacks

- New agents may have side effects or risks unknown to the doctors.
- The side effects, and results, of the agent may be worse than what's now recommended.
- Even if a new agent is helpful, it may not work for you.
- Health insurance and managed care providers don't always cover all costs in a clinical trial. (To find out what costs are likely to be covered for you, talk to a member of the research team or a social worker.)

Questions You Should Ask

Finding answers, and making choices, may be hard for people who are at risk for cancer — and for those who care about them. It's important for you to discuss your concerns and your choices with your doctor and with the staff of any clinical study that you're thinking of joining.

Ask questions about any issues that concern you. You need to review your choices.

Tips for Getting Information

When you talk with your doctor or members of the research team:

- Take a family member or friend along for support and for help in asking questions or recording answers.
- Plan ahead what to ask — but don't be afraid to ask any new questions you think of while you're there.
- Write down your questions in advance, to make sure you remember to ask them all.
- Write down the answers — in this booklet or someplace else--where you can review them when you want.
- Bring a tape recorder to make a record of what's said (even if you write down answers).

Here are some questions you may want to ask about:

The Study

1. What's the purpose of the study?

2. Why do doctors think the approach may work? (For example, how has it been studied before?)

3. Who will sponsor the study?

4. Who has reviewed and approved it?

5. How are the study results and safety of participants being checked?

6. How long will the study last?

7. What will I have to do if I join?

8. Will I ever know if I'm taking the study agent that's being studied?

Possible Risks and Benefits

1. What are the short-term benefits for me?

2. What are the long-term benefits for me?

3. What are the short-term risks, such as side effects, for me?

4. What are the long-term risks for me?

5. What other prevention options do people with my risk for cancer have?

6. How do the risks and benefits of this trial compare with those options?

Your Participation and Care

1. What kinds of therapies, tests, or procedures will I have during the trial?

2. Will they hurt, and if so, for how long?

3. How do they compare with the care I'd have outside the trial?

4. How often, and for how long, will I take the study agent that is being studied?

5. Will I be able to take my regular medications?

6. Where will I have my medical exams?

7. Will I be able to see my own doctor?

8. Who will be in charge of my care?

Personal Issues

1. How could being in the study affect my daily life?

2. Can I talk with other people who are in the study?

Cost Issues

1. Will I have to pay for any part of the trial, such as tests or the study agent?

2. If I will, what are the charges likely to be?

3. What is my health insurance likely to cover?

4. Who can help answer any questions from my insurance company or health plan?

Other Questions

Use this space to write down other questions you have.

Others Can Help

As you make your decisions, remember that there are resources for people who have a higher risk for cancer. The resources on page 23 can give you more information and put you in touch with contacts in your community.

National Cancer Institute Information Resources

If you have questions about cancer prevention clinical trials, ask your doctor, nurse, or other health provider. It may be helpful for you to bring this booklet with you to an office visit. Use the spaces provided to write down information you'll want to remember or refer to later.

You may want more information for yourself, your family, and your doctor. The following National Cancer Institute (NCI) services are available to help you.

Telephone...

Cancer Information Service (CIS)

Provides accurate, up-to-date information on cancer to patients and their families, health professionals, and the general public. Information specialists translate the latest scientific information into understandable language and respond in English, Spanish, or on TTY equipment.

Toll-free: **1-800-4-CANCER** (1-800-422-6237)

TTY: 1-800-332-8615

Internet...
These web sites may be useful:

http://www.nci.nih.gov

NCI's primary web site; contains information about the Institute and its programs.

http://cancerTrials.nci.nih.gov

CancerTrials; NCI's comprehensive clinical trials information center for patients, health professionals, and the

public. Includes information on understanding trials, deciding whether to participate in trials, finding specific trials, plus research news and other resources.

http://cancernet.nci.nih.gov

CancerNet™ ; contains material for health professionals, patients, and the public, including information from PDQ® about cancer treatment, screening, prevention, supportive care, and clinical trials, and CANCERLIT®, a bibliographic database.

http://rex.nci.nih.gov

Includes news, upcoming events, educational materials, and publications for patients, the public, and the mass media.

http://chid.nih.gov/ncichid/

Cancer Patient Education Database; provides information on cancer patient education resources for patients, their families, and health professionals.

E-mail...

CancerMail

Includes NCI information about cancer treatment, screening, prevention, and supportive care. To obtain a contents list, send e-mail to cancermail@icicc.nci.nih.gov with the word “help” in the body of your message.

Fax...

CancerFax®

Includes NCI information about cancer treatment, screening, prevention, and supportive care. To obtain a contents list, dial 301-402-5874 from a fax machine hand set and follow the recorded instructions.

Glossary

Action studies: In cancer prevention clinical trials, studies that focus on finding out whether actions people take can prevent cancer.

Agent studies: In cancer prevention clinical trials, studies that focus on examining whether taking certain medicines, vitamins, minerals, or food supplements can prevent cancer.

Benign: Not cancerous; cannot invade neighboring tissues or spread to other parts of the body.

Bias: Having an idea about what the study results will show before the clinical trial is conducted.

Chemoprevention studies: Also called "cancer prevention agent studies." Cancer prevention studies that test whether the study agent — usually medicines, vitamins, minerals, food supplements, or a combination of them — can reduce a person's chances of getting cancer.

Clinical trials: Also called "clinical studies." Research studies with people. Each trial tries to answer specific scientific questions and to find better ways to prevent, detect, or treat diseases or to improve care.

Colon polyps: Abnormal growths of tissue on the lining of the bowel. Polyps are a risk factor for cancer of the bowel.

Consent form: A document that provides key facts about a clinical trial. This includes information about the study agent, tests that study participants may have, and possible benefits and risks. Although all participants in a clinical trial must sign a consent form, they can leave the study at any time. As a trial proceeds, there may be new consent forms.

Control group: In a Phase III cancer prevention clinical trial of a study agent, the group that receives either a placebo or a standard agent that is being compared to a new agent.

Data Safety and Monitoring Committee: An impartial group that provides oversight of a clinical trial and reviews the results to see if they are acceptable. This group determines if the trial should be altered or closed.

Double-blind: A method used to prevent bias in a clinical trial. Neither the participants nor the doctor knows who is taking the study agent and who is not. Only researchers at a central office know.

Environmental risk factor: A hazardous agent that is known to cause cancer or increase risk when people are exposed to it, for example asbestos, radon, and second-hand smoke.

Followup: Keeping track of the health of people who participate in a clinical study for a period of time during the study and after the study ends.

Gene alterations: Changes in the cells' unit of inheritance that may be good or bad for the body.

Hereditary risk factor: Altered or mutated genes that make it more likely that a person will develop cancer. Also called an "inherited" risk factor, but this does not necessarily have to be inherited from a parent. It can be acquired in a germline cell through lifestyle behaviors or through exposure to hazards in the environment. Once this cell is altered, the mutated gene can pass to the next generation.

Informed consent: A process in which a person learns key facts about a clinical trial, including potential risks and benefits, before deciding whether or not to participate in a study. Informed consent continues throughout the trial.

Institutional Review Board (IRB): A group of scientists, doctors, clergy, and consumers at each health care facility that participates in a clinical trial. IRBs are designed to protect study participants. They review and must approve the action plan for every clinical trial. They check to see that the trial is well designed, does not involve undue risks, and includes safeguards for patients.

Intervention group: The group receiving the study agent that's being tested in a clinical trial or clinical study.

Investigator: A researcher in a clinical trial or clinical study.

Lifestyle risk factor: Personal behavior, such as smoking, that may increase a person's risk for cancer. Also called 'behavioral risk factor.'

Malignant: Cancerous. Malignant tumors can invade surrounding tissues and spread to other parts of the body.

Medical risk factor: Health conditions that may lead to cancer. See colon polyps.

Placebo: A tablet or capsule that looks like the study agent but doesn't contain any active ingredient. Some people call a placebo a "sugar pill."

Protocol: An action plan for a clinical trial. The plan states what the study will do, how, and why. It explains how many people will be in it, who's eligible to participate, what study agents they'll take, what tests they'll receive and how often, and what information is gathered.

Randomization: A method used to prevent bias in research. People are assigned by chance, often by a computer, either to receive the study agent (intervention group) or not (control group).

Risk factor: A condition that increases a person's chance of developing a particular disease. Cancer risk factors include age, lifestyle (including exposure to cancer-causing substances), family history of cancer, or medical conditions that can lead to cancer.

Side effects: Problems that occur when a study agent causes expected but unpleasant conditions, like dry skin or headaches.

Sponsor: The agency or firm responsible for financing the clinical trial.

Study agent: A medicine, vitamin, mineral, food supplement, or a combination of them that's being tested in a cancer prevention trial. A study agent is usually something that's taken by mouth (eaten or swallowed).

Tissue: Specialized cells arranged in a precise pattern in the body.

Tumor: An abnormal growth of tissue. Tumors may be either benign or cancerous.

Ultraviolet: Invisible rays that are part of the energy that comes from the sun which can burn the skin and cause skin cancer.